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(54) **RETINAL PROSTHESIS WITH MULTIPLE ELECTRODE ARRAYS FOR GREATER FIELD OF VIEW**

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CPC ***A61N 1/0543*** (2013.01); ***A61F 9/08*** (2013.01); ***A61N 1/36046*** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

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(57) **ABSTRACT**

The artificial percept of light may be created by electrically stimulating the neurons of the retina. While a photolithographed array internal to the retina provides superior resolution, an array external to the retina provides easier implantation and improved manufacturability. Therefore it is advantageous to supply a high-resolution electrode array internal to the sclera, near the fovea and a lower-resolution electrode array eternal to the sclera near the periphery of the retina.

It is advantageous to encourage current to flow through the retina by providing a physically separate and distinct electrode array and return electrode. The high-resolution electrode array and lower-resolution electrode array may be return electrodes for the other, or completely separate return electrodes may be provided.

10 Claims, 3 Drawing Sheets